

The State of the Colorado River and the Road Ahead

December 13, 2021

I. Introduction

For almost a century, the Colorado River Basin States have relied on the certainty provided by the Colorado River Compact to develop water supplies for 40 million people, 5.5 million acres of farmland, water for our national public lands, and more.

Over the last two decades, the Colorado River Basin has faced extremely dry hydrology—as we are clearly seeing this fall. Indeed, conditions deteriorated very quickly over last summer due to dry soil conditions that significantly reduced spring runoff. And that portends more challenges ahead.

Reservoir levels are now at historic lows and climate change threatens to stress the system even further. Against this backdrop, the Basin States are in the process of renegotiating how the basins reservoirs will operate.

For my talk today, I will first provide some historical context for the Colorado River Compact, which is more relevant than ever. I will then discuss the impacts of the last two decades on water users in Colorado and the Colorado River basin. Finally, I will discuss the framework for protecting Colorado’s interests as we meet these challenges both now and into the future.

II. Background

A. Colorado River Compact

The 1922 Colorado River Compact¹ is the first interstate water compact negotiated in the United States and it has served as the foundation for the management of the Colorado River for almost one hundred years. The Compact grew out of concerns that the Lower Basin (California, Nevada, Arizona) was developing more rapidly than the Upper Basin (Wyoming, Utah, Colorado, and New Mexico) and claims from the federal government that it should own all the undeveloped and excess waters in the Western States.²

The vision for the Compact came from a Coloradan, Delph Carpenter. Carpenter famously realized that, under the common law system of priority allocation, states like Colorado would be adversely impacted without some protective agreement. He realized that as states like California put a lot of water to use faster than the other states, it could leave Colorado relatively worse off should the occasion arise when there was a need to curtail water uses. Consequently, Carpenter pushed an interstate compact model that allowed the Basin States to move away from a strict priority system that would see, in practice, most of the water go to California first. Under Carpenter’s model, the

¹ Colorado River Compact of 1922 (enacted *inter alia* at Colo. Rev. Stat. § 37-61-101).

² Daniel Tyler, Silver Fox of the Rockies: Delphus E. Carpenter and Western Water Compacts (2003).

Upper Basin States would be apportioned a quantity of water that allowed them to develop gradually over time, providing a level of certainty and avoiding lengthy legal battles.

In 1922, the States negotiated the Compact to serve several purposes. First, it provided for greater certainty and security for all of the states who rely on water from the Colorado River. Second, the Compact worked to eliminate pressures to develop uses for the water in order to build up its priority position. Third, the Compact allowed Upper Basin States to develop supplies at their own pace and safeguard water for future uses. Fourth, it allowed the states to determine how the water would be divided and apportioned amongst themselves in perpetuity. Fifth, the Compact protected state autonomy and prevented federal control over the Colorado River. Finally, it sought to promote interstate comity, removing causes of present and future controversies and aimed to create a culture of collaboration.

In entering into the Compact, the Colorado River Basin States recognized that any plan to apportion water in the Colorado River basin would be dependent upon storage.³ An undertaking of this magnitude was beyond the resources of the Basin States alone and required significant federal investment and cooperation. That investment continues today. So, too, does the federal obligation to operate and maintain that infrastructure and fully account for system losses in the basin.

The Colorado River Compact remains in place today and the culture of collaboration it forged remains a critical asset in the West. And where the Compact lacks details, the Basin States and federal government have enacted federal legislation and negotiated guidelines to fill in the gaps. As we approach the challenge of crafting a new set of guidelines, it merits reflection on how the 2007 Guidelines have worked in practice.

B. 2007 Interim Guidelines

In 2007, the Compact States adopted the Colorado River Interim Guidelines for the Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (“2007 Guidelines”).⁴ These guidelines provide the current operational rules for Lakes Powell and Mead. By definition, they implement the Compact’s requirements and *do not amend the Compact*. As these guidelines expire in 2026, we will soon begin discussions about what a new set of post-2026 interim reservoir operation guidelines could look like.

The 2007 Guidelines were intended to address drought, rapidly declining reservoir levels, and risks if the drought continued. For the very first time in the Basin, the 2007 Guidelines identified how shortages would be shared among the Lower Basin States and were designed to protect

³ See generally, Minutes of Colorado River Compact Commission, 1922 a Mimeographed Reproduction of the Minutes of the First Eighteen Sessions of the Colorado River Compact Commission (1928) (found at <http://www.riversimulator.org/Resources/LawOfTheRiver/MinutesColoradoRiverCompact.pdf>).

⁴ Bureau of Reclamation, Dep’t of Interior, Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (2007) (found at <https://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf>).

consumptive uses in the Upper Basin. In practice, however, the scheduled reductions in the Guidelines were not enough. In particular, as reservoir storage reached critically low levels, the Basin States adopted Drought Contingency Plans in 2019 for both the Upper and Lower Basins, supplementing the 2007 Interim Guidelines until the adoption of a new set of interim guidelines would take effect after 2026.

III. Impacts on Colorado and the other Basin States

In order to protect Colorado's significant interests in the Colorado River during these challenging times, an important place to start is understanding that there are significant differences between the operations and systems in the Lower Division States - located below Lakes Powell and Mead - and the Upper Division States - located above these reservoirs. Let me discuss each Basin in turn.

A. Upper Basin Impacts

As any water user in Colorado can tell you, we have faced shortages nearly every year for the last twenty years because our use of water in Colorado, and the other Upper Basin States, is naturally limited by hydrology and the prior appropriation doctrine. Our biggest reservoir is the snowpack. We cannot control its operation and, on account of a changing climate, we have less natural snowpack today than twenty years ago. In short, each Spring, our snowpack does not go as far as it once did. *As such, Upper Basin water users take shortages nearly every year.* These shortages are greater in dry years and will only increase in a warming and drying climate.

Because of our limited supply over the last two decades, the Upper Basin consumes much less water than it is apportioned under the Compact—notably, about 3 million acre-feet less every year. This does not mean that the Upper Basin does not need or cannot use more water. When water is available, it is diverted and used. But, given the natural constraints we are facing, we, by necessity, have used less water and adapted.

The Upper Basin, at the same time as it is using less water, is facing increased demands for water because population levels are increasing over time. Given this fact, it merits emphasis that the Upper Basin's consumptive uses are well below its apportionment under the Colorado River Compact and are greatly outpaced by the Lower Basin's uses. In short, we in Colorado continue to work hard to get more bang for our water buck, so to speak, developing adaptive strategies that include greater efficiencies, greater conservation efforts, and, where possible, exploring more flexible storage solutions.

B. Lower Basin Operations

Lower Basin water users get their water supplies from releases of water from Lakes Powell and Mead. In contrast to the Upper Basin's variable supply from natural snowpack, these reservoirs provide a secure and reliable source of supply. Consequently, the Lower Basin has not experienced shortages to date and has not had to cut back on its water use. Stated differently, Lake Mead is

like the checking account for the Lower Basin, allowing those states to draw from it to meet its regular demands and Lake Powell is like their savings account, allowing for those states to draw from it when they've overspent. And that is exactly what they've done for the past two decades.

The painful reality about water use under the Colorado River Compact is that Lower Basin States have long used above and beyond what they are apportioned by the Compact. Since the adoption of the 2007 Interim Guidelines, for example, releases from Lake Powell have averaged 8.8 million acre-feet per year. During this time, Lake Mead's elevations have continued to decline, meaning that the Lower Basin has engaged in the water equivalent of deficit spending. Moreover, during this time of ongoing drought, the Upper Basin States have engaged in a range of strategies to do more with less and reduce their water use while Lower Basin States have continued to receive releases from Lake Powell above-and-beyond the amount to which they are entitled.

This is the background for what is now a new day in water management. For the very first time ever, the Secretary of the Interior has declared a Tier One Shortage in the Lower Basin that will take effect in 2022. But this overdue step is only a baby step. In particular, this action only applies to Arizona and Nevada,⁵ with no impact on California. Moreover, the impact of this action on Arizona and Nevada water users remains unclear. Consider, for example, that Nevada reported that there would be no immediate impact because it had "successfully pre-conserved" so that reduced deliveries to their member agencies would not be necessary.⁶

IV. The Road Ahead

Over the course of the summer, on account of the severe drought we are living through, conditions in the Colorado River Basin have deteriorated significantly. As a result, the projections for Lakes Powell and Mead are more dire than ever. As many have reported, Lake Powell and Lake Mead are now at the lowest levels on record—that is, since they were first filled.

As a result of these critically low reservoir levels, some elements of the 2019 Drought Contingency Plan (DCP) are being put into place more rapidly than the states anticipated at the time the 2019 DCPs were drafted. Let me discuss what this means in practice.

A. Interstate

a. Upper Basin

⁵ Bureau of Reclamation, Dep't of Interior, Agreement Concerning Colorado River Drought Contingency Management and Operations (2019) (found at <https://www.usbr.gov/dcp/docs/final/Companion-Agreement-Final.pdf>); *See also*, Colorado River Drought Contingency Plan Authorization Act, Pub. L. No. 116-14, 133 Stat. 850 (2019) (Congressional Act enacting the implementation of the Colorado River Drought Contingency Plan).

⁶ KTNV Staff, *Watch: Federal Agency Discusses Drought Conditions Impacting Colorado River, Lake Mead*, KTNV Las Vegas, Minute 41:30 (last updated Aug. 16, 2021, 2:49 PM), <https://www.ktnv.com/news/drought-crisis/watch-federal-agency-discusses-drought-conditions-impacting-colorado-river-lake-mead> (last visited October 20, 2021). <https://www.ktnv.com/news/drought-crisis/watch-federal-agency-discusses-drought-conditions-impacting-colorado-river-lake-mead>.

On very short notice, the Bureau of Reclamation, through the exercise of emergency authority, released water from Blue Mesa and Flaming Gorge Reservoirs last July, August, and September. The Bureau has stated that is going to release more water from Navajo Reservoir as we wind up this year.⁷ These releases are intended to put more water in Lake Powell to protect critical elevations there.

The release of water from Blue Mesa Reservoir had significant impacts, particularly on the lake recreation season, which is a major contributor to the local economy. As a direct result of this action, the marina and other businesses were forced to close six weeks early, leading 25 people to lose their jobs and depriving businesses of a 25% loss of annual revenue, including the loss of peak season revenues over the Labor Day weekend. Colorado repeatedly objected to the timing of those releases and asked Reclamation to delay them until the fall, but Reclamation went ahead with them anyway, even though it was far from clear that these actions would have their intended effects.

Reclamation has since agreed to not make any more emergency releases for the time being. The Upper Basin States and Reclamation are now meeting regularly to discuss a potential plan for future releases from these reservoirs that would take effect in the Spring of 2022. Importantly, the plan will include assessment of the effectiveness of the releases, consideration of timing and duration of releases, and a plan for recovery of water already released and future releases at the reservoirs. Each of these steps are requirements set forth in the Drought Response Operation Agreement in the Upper Basin Drought Contingency Plan.⁸

B. How Colorado is addressing the impacts of drought in the Colorado River Basin

The painful reality is that Colorado's water users have long struggled with the impacts of extreme drought while the Lower Basin States will only begin to confront their first shortages in 2022. Without big reservoirs above us, we don't have the same consistency in our deliveries and face increasing uncertainties in our water supplies.

For those who suggest the impact of climate change is an abstract threat, they are not paying attention to our water challenges. We have already endured a 20-year journey of adapting to a changing climate, but that journey is now facing even more challenging terrain ahead. It's been a very hard year and we are facing some difficult times down the road.

⁷ Press Release, Bureau of Reclamation, Dep't of Interior, Reclamation's July 24-Month Study Implements Contingency Operations in the Upper Colorado River Basin (July 16, 2021) <https://www.usbr.gov/newsroom/#!/news-release/3917?filterBy=topic&topic=Colorado%20River> (last visited October 22, 2021).

⁸ Bureau of Reclamation, Dep't of Interior, Agreement Concerning Colorado River Drought Contingency Management and Operations (May 20, 2019) <https://www.usbr.gov/dcp/docs/final/Companion-Agreement-Final.pdf>; Enacted by Colorado River Drought Contingency Plan Authorization Act, Pub. L. No. 116-14, 133 Stat. 850.

The actions discussed above are, we recognize, short term measures to adapt to a crisis situation. Looking further down the road, we know that we need to plan for the longer term. As we do so, we can take solace from our past successes in adapting to a challenging environment.

V. Long-Term Issues

Over the next few years, we will be working hard to negotiate the post-2026 interim guidelines and prepare for the next steps of the Colorado Water Plan. As we do so, we must work together to support local efforts to collaborate among water users and stakeholders and to assist in developing mitigation measures and response plans that can put us in a position to adapt to the hotter and drier conditions that we can expect in the years and decades ahead.

A. Interstate

This new negotiation provides us with an opportunity to ensure that Colorado's interests in the Colorado River are protected and that all of the Compact States act responsibly in a new environment.

1. Technical: Data and Measurement

It is often said that you can't manage what you can't measure. This certainly holds true for management of the Colorado River. That means one critical first step is we must make sure we have the right tools in place to support the effort.

a. Interstate

From a basin-wide perspective, we are committed to working closely with the Bureau of Reclamation and the other Basin States to improve the accuracy and reliability of the long-term planning model, the CRSS (Colorado River Simulation System). This effort will ensure, among other things, that this model reflects the significant variability of snowpack and soil moisture in the Upper Basin, and the associated consumptive uses, from one year to the next.

The Basin States have asked that the Bureau of Reclamation provide technical assistance for these negotiations and to include modeling tools that use the most accurate and reliable data and reflect the best available science. In addition to technical resources from the Basin States, the Bureau has committed to also provide resources for this technical assistance and to address issues related to the accuracy of the modeling results. We look forward to working with the Basin States and Reclamation on developing accurate and reliable technical tools to inform long-term planning efforts.

b. Intrastate

Within Colorado, we are focusing on how we support the State Engineer's development of measurement rules that will enable us to comply with our interstate compact obligations correctly and fairly. By so doing, we will protect Colorado's water users. In short, only by implementing an effective and accurate measuring system can we ensure that we are not letting go more than we need to under our legal obligations.

2. Achieving Colorado's Goals for Post-2026 Interim Guidelines

Our negotiation of the post-2026 interim guidelines will require us to focus on a set of clear goals. In short, those goals are to:

- Provide additional water supply security and certainty for Colorado's water users and work with the other Basin States to do the same for the entire Colorado River Basin;
- Avoid the need for curtailment in the Upper Basin;
- Address overuse in the Lower Basin and provide appropriate incentives for conservation and responsible water management;
- Ensure operations of Powell and Mead protect the interests of both the Upper and the Lower Basin;
- Comply with applicable environmental laws; and
- Support coordination with Mexico, while noting that this will be a domestic agreement.

The post-2026 interim guidelines must be structured to recognize the legal and hydrologic differences between the Upper and Lower Basins, instituting rules of the road that are viable and sustainable for each Basin. A challenge we must confront, given the history and highly variable hydrology in the Upper Basin, is how we can preserve the much-needed flexibility for the Upper Division States while ensuring permanent solutions to overuse by the Lower Division States.

3. Advancing Goals and Objectives in Colorado's Water Plan

One of the Colorado Water Conservation Board's biggest projects is the Colorado Water Plan - it's really our state's water roadmap and ties everything that we do together.

The Plan focuses on a few major areas:

- a productive economy;
- vibrant and sustainable cities;
- viable and productive agriculture;
- a strong and healthy environment; and

- robust recreation and tourism industries.⁹

Many of the goals or action areas outlined within the Water Plan have completion goals by 2050. And in 2020, we celebrated the Water Plan's 5th Anniversary and were pleased that, by that point, 76% of the stated action within the plan had been initiated. As of 2020, CWCB had supported more than 240 projects across the state with \$63.5 million in funding. But as I have repeatedly emphasized, we need to invest more in water infrastructure.¹⁰ Too much of our infrastructure is outdated and there are projects on the drawing boards that can provide more adaptability in our water management and an economic benefit to important communities in our state. And with an influx of federal dollars eligible to be spent on such projects, we have a critical opportunity to follow through on the Water Plan's commitment to just such investments.

VI. Conclusion

We face incredibly significant challenges in the Colorado River Basin that are shared across our entire state. They present opportunities for improved tools in which to base operational decisions, partnership and collaboration, and policy innovation. As we meet these challenges, I know that Colorado's Tribes, water users, and stakeholders will all play a critical role in helping us chart our path forward. I look forward to working together as make and implement crucial decisions to do just that. Thank you.

⁹ Colorado Water Conservation Bd., Colorado Dep't of Nat. Res., *The Colorado Water Plan*, 1-8—1-9 (2015) <https://dnrweblink.state.co.us/cwcb/0/doc/199498/Electronic.aspx?searchid=80d50cb3-95bf-405c-bfa5-587c633c7136>.

¹⁰ The Importance of Investing in Water Infrastructure, *Phil Weiser, Colorado Attorney General*, August 25, 2021.